and not necessarily for describing a sequential or chronological order. It is to be understood that the terms so used are interchangeable under appropriate circumstances (unless clearly disclosed otherwise) and that the embodiments of the disclosure described herein are capable of operation in other sequences and/or arrangements than are described or illustrated herein.

What is claimed is:

1. A peristaltic pump, comprising:

a plunger configured to move relative to a tube;

a spring configured to bias the plunger toward the tube;

an actuator configured to cause the plunger to move away from the tube, wherein the actuator is further configured to disengage from the plunger;

a position sensor configured to sense a position of the plunger; and

a processor configured to estimate fluid flow within the tube using the position sensor.

2. The peristaltic pump according to claim **1**, wherein the actuator, spring, and plunger are configured to charge the spring when the actuator moves the plunger away from the tube.

3. The peristaltic pump according to claim **2**, wherein the actuator, spring, and plunger are configured to discharge the spring when the actuator disengages the plunger.

4. The peristaltic pump according to claim **2**, wherein the actuator is configured to mechanically disengage from the plunger to thereby discharge the spring to bias the plunger against the tube.

5. The peristaltic pump according to claim **1**, wherein movement of the actuator does not correspond to movement of the plunger when the actuator disengages from the plunger.

6. The peristaltic pump according to claim **1**, wherein the actuator is configured to not contribute to a force of the plunger against the tube.

7. The peristaltic pump according to claim **1**, wherein the actuator is configured to mechanically engage the plunger to lift the plunger away from the tube and mechanically disengage the plunger to allow the spring to generate a force from the plunger against the tube.

8. The peristaltic pump according to claim **7**, wherein the actuator is further configured to allow the spring to bias against the plunger.

9. The peristaltic pump according to claim **1**, wherein the actuator is configured to allow the spring to bias the plunger toward the tube without contributing to a force of the plunger against the tube.

10. The peristaltic pump according to claim **1**, wherein the peristaltic pump is configured such that a force of the plunger applied to the tube by the plunger is produced by the spring and not the actuator.

11. The peristaltic pump according to claim **1**, further comprising an inlet valve and an outlet valve, wherein the peristaltic pump is configured to:

close the inlet and outlet valves;

disengage the actuator from the plunger;

determine a first position of the plunger;

open the outlet valve;

engage the actuator to the plunger;

determine a second position of the plunger; and

estimate a volume of fluid flow using the first and second positions.

12. The peristaltic pump according to claim **1**, further comprising an actuator sensor operatively coupled to the actuator and configured to determine movement of the actuator.

13. The peristaltic pump according to claim **12**, wherein the processor compares a first static region of the position sensor to a second static region of the position sensor to estimate the fluid flow.

14. The peristaltic pump according to claim **13**, wherein the processor determines the first static region by identifying the first static region within a predetermined range of movement values as indicated by the actuator sensor.

15. The peristaltic pump according to claim **13**, wherein the processor determines the second static region by identifying the second static region within a second predetermined range of movement values as indicated by the actuator sensor.

16. The peristaltic pump according to claim **13**, wherein the processor determines the first and second static regions by measuring the position of the plunger using the position sensor at predetermined values as indicated by the actuator sensor.

17. The peristaltic pump according to claim **13**, wherein the processor determines the first static region by identifying a peak movement of the plunger as measured by the position sensor and identifies the second static region to be after the identified peak movement of the plunger.

18. The peristaltic pump according to claim **1**, wherein the processor compares a first static region measured by the position sensor to a second static region measured by the position sensor to estimate a volume of the fluid flow.

19. The peristaltic pump according to claim **18**, wherein the processor determines the second static region by identifying an end of the first static region.

20. A peristaltic pump, comprising:

a first shaft configured to at least partially rotate;

a first cam operatively coupled to the first shaft;

a second shaft configured to at least partially rotate;

a plunger pivotally coupled to the second shaft, the plunger having a cam follower configured to engage the first cam of the first shaft and disengage from the first cam of the first shaft, wherein the plunger is configured to pivot to a first position to compress a tube and to a second position away from the tube;

a bias member configured to bias the plunger to the first position;

a position sensor configured to measure a position of the plunger; and

a processor coupled to the position sensor to estimate a volume of fluid discharged from the tube when the bias member causes the plunger to move towards the first position.

21. The peristaltic pump according to claim **20**, wherein:

the plunger and the first cam are configured to compress the tube using only a force of the bias member,

the first cam is configured to retract the plunger away from the tube, and

the plunger is configured to engage the first cam such that the first cam does not force the plunger against the tube.

22. The peristaltic pump according to claim **20**, wherein the plunger is L-shaped.